

In the Claims:

1-25. (cancelled)

26. (previously presented) An apparatus, comprising:

a correction circuit coupled to receive a first symbol transmitted from a first antenna at a one time and a complement of a conjugate of a second symbol transmitted from a second antenna at the one time, and coupled to receive the second symbol transmitted from the first antenna at another time and a conjugate of the first symbol transmitted from the second antenna at the another time, and coupled to receive a first fading parameter estimate signal determined from a first plurality of symbols transmitted from the first antenna, the first plurality including the first symbol and the second symbol, and coupled to receive a second fading parameter estimate signal determined from a second plurality of symbols transmitted from the second antenna, the second plurality including the complement of the conjugate of the second symbol and the conjugate of the first symbol, the correction circuit producing a first symbol estimate in response to the first symbol and the conjugate of the first symbol and the first and second fading parameter estimate signals and producing a second symbol estimate in response to the second symbol and the complement of the conjugate of the second symbol and the first and second fading parameter estimate signals; and

a combining circuit coupled to receive a plurality of symbol estimates including the first and second symbol estimates, the plurality of symbol estimates corresponding to a respective plurality of signal paths, the combining circuit producing a first symbol signal in response to the plurality of symbol estimates.

27-29. (canceled)

30. (previously presented) An apparatus as in claim 26, wherein the correction circuit receives the first symbol and the complement of the conjugate of the second first symbol via a common receive antenna.

31. (previously presented) An apparatus as in claim 26, wherein the correction circuit receives the first symbol and the complement of the conjugate of the second first symbol over a common frequency band.

32. (previously presented) An apparatus as in claim 26, wherein the plurality of symbol estimates corresponds to one of the first and second symbols.

33. (previously presented) An apparatus as in claim 26, wherein the combining circuit is a rake combiner.

34. (previously presented) An apparatus as in claim 26, wherein said first antenna and said second antenna are transmitting antennas.

35. (previously presented) An apparatus as in claim 26, wherein said correction circuit is coupled to an antenna that receives said first symbol transmitted from said first antenna and said complement of said conjugate of said second symbol transmitted from said second antenna.

36. (currently amended) A method of operating circuits, comprising the steps of:

receiving at a mobile antenna a first symbol transmitted from a first antenna at a one time and a complement of a conjugate of a second symbol transmitted from a second antenna at the one time;

receiving at the mobile antenna the second symbol transmitted from the first antenna at another time and a conjugate of the first symbol transmitted from the second antenna at the another time;

producing in a first circuit a first fading parameter estimate signal determined from a first plurality of symbols transmitted from the first antenna, the first plurality including the first symbol and the second symbol;

producing at the first circuit a second fading parameter estimate signal determined from a second plurality of symbols transmitted from the second antenna, the second plurality including the complement of the conjugate of the second symbol and the conjugate of the first symbol;

producing from the first circuit a first symbol estimate and a second symbol estimate in response to the first symbol and the conjugate of the first symbol and the second symbol and the complement of the conjugate of the second symbol and the first and second fading parameter estimate signals;

receiving at second circuits a plurality of symbol estimates including the first symbol estimate and the second symbol estimate, the plurality of symbol estimates corresponding to a respective plurality of signal paths; and

producing from the second circuits a first symbol signal and a second symbol signal in response to the plurality of symbol estimates.

37-39. (canceled)

40. (previously presented) The method of claim 36, further including receiving the first symbol and the complement of the conjugate of the second symbol over a common channel.

41. (previously presented) The method of claim 36, wherein the first symbol and the complement of the conjugate of the second symbol are received over a common frequency band.

42. (previously presented) The method of claim 36, wherein the plurality of symbol estimates corresponds to one of the first and second symbols.

43-45. (canceled)

46. (new) The method of claim 36 in which the producing from the first circuit a first symbol estimate and a second symbol estimate in response to the first symbol and the conjugate of the first symbol and the second symbol and the complement of the conjugate of the second symbol and the first and second fading parameter estimate signals occurs in a phase correction circuit.

47. (new) The method of claim 36 in which the producing from the second circuits a first symbol signal and a second symbol signal in response to the plurality of symbol estimates occurs in rake combining circuits.